Claims

1. System for analysing sample liquids by evaluating test elements with an analytical unit (20) in which a test element (10) to be analysed is positioned by a holder (21, 22, 120, 140) in an analytical position relative to the analytical unit and the system additionally comprises a position control unit to check whether an analytical area of the test element is correctly positioned relative to the analytical unit wherein the position control unit comprises
   - a light source (30, 2) to irradiate an area of the test element and preferably the analytical area (11),
   - a detector (31, 131) to detect light reflected from the area and
   - an evaluation unit

   and
   the light source and detector are positioned relative to one another in such a manner that the light intensity of specularly reflected radiation at the detector when the test element is correctly positioned is different from a light intensity when it is incorrectly positioned and the evaluation unit recognizes any faulty positioning on the basis of the light intensity at the detector.

2. System as claimed in claim 1, in which the light source and detector are arranged relative to one another in such a manner that when the test element is correctly positioned, specularly reflected radiation falls on the detector and the proportion of specularly reflected radiation decreases when a

faulty positioning occurs.

3. System as claimed in claim 1, in which the light source and detector are arranged relative to one another in such a manner that when the test element is correctly positioned, the proportion of radiation specularly reflected from the test element is small or zero and is larger when the test element is incorrectly positioned.

4. System as claimed in claim 1, in which the analytical unit is used to irradiate the analytical area and the concentration of an analyte is determined on the basis of the radiation reflected from the analytical area or transmitted through the analytical area.

5. System as claimed in claim 4, in which the analytical unit uses the detector of the position control unit to detect radiation.

6. System as claimed in claim 4, in which the analytical unit uses the light source of the position control unit to irradiate the analytical area.

7. System as claimed in claim 1, in which the test element is deformable along its longitudinal axis, is held in an area at one end of the axis by a holder and the analytical area is at a distance from the fixed end such that a faulty positioning of the analytical area relative to the analytical unit occurs when the test element is bent along its longitudinal axis.

8. System as claimed in claim 1 or 5, in which the analytical unit has a measuring light source and a control unit sequentially actuates the measuring light source and the light source of the position control unit.

9. System as claimed in claim 8, in which the measuring light source irradiates the analytical area below an angle of α and the light source of the position control unit irradiates the analytical area below an angle of β relative to the normal plane whereby $\alpha < \beta$.

10. System as claimed in claim 1, in which the position control unit comprises a second light source which is positioned relative to the detector in such a manner that at the detector the light intensity of this radiation reflected from the test element changes inversely to the light intensity of the light source for position control when the test element is moved away from its correct position.

11. System as claimed in claims 2 and 10, in which the proportion of specularly reflected radiation of the light source for position control decreases at the detector when a faulty positioning occurs.

12. Method for analysing sample liquids by evaluating test elements using an analytical unit in which a position control unit is used to check whether an analytical area (11) of the test element is positioned correctly relative to the analytical unit for which purpose an area of the test element, preferably the analytical area, is irradiated by a

light source (30, 2), radiation reflected from the area is detected by a detector (31, 131) and a signal generated by the detector is recorded by an evaluation unit in order to check the positioning of the analytical area wherein the light source and detector are positioned relative to one another in such a manner that the intensity of radiation at the detector that has been specularly reflected from the test element is different when the analytical area is correctly positioned than the intensity when it is incorrectly positioned.

13. Method as claimed in claim 12, in which the analytical unit has a separate light source (1a, 1b) but the detector (131) of the position control unit is used for detection and the light source (2) of the position control unit is actuated at a time point T_K and the measuring light source is actuated at a time point T_A and the position of the analytical area is checked on the basis of the signal generated by the detector at time point T_K and an evaluation to determine the concentration of an analyte is carried out based on the signal generated at time point T_A.

14. Method as claimed in claim 13, in which the time points T_K and T_A are less than one second apart.